

1 CLAIMS:

2 A communication device comprising:  
3 a single buffer configured to store communication data;  
4 control circuitry coupled with the buffer and configured to generate a  
5 plurality of packets including different amounts of communication data from  
6 the buffer; and  
7 communication circuitry coupled with the control circuitry and configured  
8 to communicate the packets.

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10 2. The device according to claim 1 wherein the control circuitry is  
11 configured generate a plurality of packet types, and further comprising control  
12 circuitry configured to extract communication data from only a portion of the  
13 buffer for one packet type and the entire buffer for another packet type.

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15 3. The device according to claim 1 wherein the control circuitry is  
16 configured to switch between generation of a first packet type including a first  
17 amount of communication data and another packet type including a second  
18 amount of communication data.

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20 4. The device according to claim 1 wherein the control circuitry is  
21 configured to switch between generation of different packet types including  
22 respective different amounts of communication data.  
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1 11. The device according to claim 1 wherein the buffer comprises a  
2 cyclical buffer.

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4 12. A communication device comprising:  
5 a buffer configured to store communication data;  
6 control circuitry coupled with the buffer and configured to generate a  
7 plurality of packets including communication data from the buffer, the control  
8 circuitry being configured to selectively address the buffer using an offset  
9 address to extract the communication data for provision within at least some  
10 of the packets; and

11 communication circuitry coupled with the control circuitry and configured  
12 to communicate the packets.  
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14 13. The device according to claim 12 wherein the control circuitry  
15 is configured to extract communication data only from a first portion of the  
16 buffer for a given packet and only from a second portion of the buffer for  
17 another packet, wherein the control circuitry utilizes the offset address to  
18 extract communication data from the second portion of the buffer.  
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20 14. The device according to claim 12 wherein the communication  
21 circuitry comprises wireless communication circuitry.  
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15. A communication device comprising:

a buffer configured to store communication data;

control circuitry coupled with the buffer and configured to selectively extract communication data from only a portion of the buffer and to generate a packet including the communication data extracted from only the portion of the buffer; and

communication circuitry coupled with the control circuitry and configured to communicate the packet.

16. The device according to claim 15 wherein the control circuitry is configured to generate a plurality of packet types and to extract communication data from only a portion of the buffer for one packet type and the entire buffer for another packet type.

17. The device according to claim 15 wherein the control circuitry is configured to switch between generation of a first packet type including a first amount of communication data and another packet type including a second amount of communication data.

18. The device according to claim 15 wherein the control circuitry is configured to switch between generation of different packet types including respective different amounts of communication data.

1 19. The device according to claim 15 wherein the control circuitry  
2 is configured to extract communication data only from a first portion of the  
3 buffer for a given packet and only from a second portion of the buffer for  
4 another packet.

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6 20. The device according to claim 15 wherein the control circuitry  
7 is configured to offset address the buffer to extract communication data from  
8 only the portion of the buffer.

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10 21. The device according to claim 15 wherein the communication  
11 circuitry comprises wireless communication circuitry.

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13 22. A communication device comprising:  
14 a buffer configured to store a given amount of communication data;  
15 control circuitry coupled with the buffer and configured to selectively  
16 generate a packet including an amount of communication data different than  
17 the given amount of communication data; and  
18 communication circuitry coupled with the control circuitry and configured  
19 to communicate the packet.  
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21 23. The device according to claim 22 wherein the control circuitry  
22 is configured to generate a plurality of packet types and to extract  
23 communication data from only a portion of the buffer for one packet type and  
24 the entire buffer for another packet type.

1 24. The device according to claim 22 wherein the control circuitry  
2 is configured to switch between generation of a first packet type including a  
3 first amount of communication data and another packet type including a second  
4 amount of communication data.

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6 25. The device according to claim 22 wherein the control circuitry  
7 is configured to switch between generation of different packet types including  
8 respective different amounts of communication data.

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10 26. The device according to claim 22 wherein the control circuitry  
11 is configured to extract communication data only from a first portion of the  
12 buffer for a given packet and only from a second portion of the buffer for  
13 another packet.

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15 27. The device according to claim 22 wherein the control circuitry  
16 is configured to selectively offset address the buffer to extract communication  
17 data from only a portion of the buffer.

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19 28. The device according to claim 22 wherein the communication  
20 circuitry comprises wireless communication circuitry.



1 33. The system according to claim 29 wherein the control circuitry  
2 is configured to extract communication data only from a first portion of the  
3 buffer for a given packet and only from a second portion of the buffer for  
4 another packet.

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6 34. The system according to claim 29 wherein the communication  
7 devices are configured to communicate using wireless communication signals.  
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1 35. A Bluetooth communications protocol communication device  
2 comprising:

3 a cyclical buffer configured to store a maximum amount of  
4 communication data to be communicated in a single packet, the communication  
5 data comprising a plurality of data samples;

6 a packet composer coupled with the buffer and configured to switch  
7 between generation of packets of a first packet type individually including a  
8 first amount of communication data from the buffer and of packets of a  
9 second packet type individually including a second amount of communication  
10 data from the buffer, the packet composer being further configured to extract  
11 communication data from only a portion of the buffer for packets of the first  
12 packet type selectively using an offset address and the entire buffer for  
13 packets of the second packet type, and wherein the packet composer is further  
14 configured to extract communication data only from a first portion of the  
15 buffer for a first packet of the first packet type and only from a second  
16 portion of the buffer for a second packet of the first packet type and only  
17 from a third portion of the buffer for a third packet of the first packet type;  
18 and

19 wireless communication circuitry coupled with the packet composer and  
20 configured to communicate the packets of the first packet type and the second  
21 packet type in accordance with a Bluetooth communications protocol.  
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36. A communication method comprising:  
storing communication data within a single buffer;  
extracting different amounts of communication data from the buffer;  
providing a plurality of packets including the different amounts of  
communication data; and  
communicating the packets after the providing.

37. The method according to claim 36 wherein the providing  
comprises providing packets of different types, and the extracting comprises  
extracting communication data from only a portion of the buffer for one  
packet type and the entire buffer for another packet type.

38. The method according to claim 36 wherein the providing  
comprises switching between a first packet type including a first amount of  
communication data and a second packet type including a second amount of  
communication data.

39. The method according to claim 36 wherein the providing  
comprises switching between plural packet types including respective different  
amounts of communication data.

1           40. The method according to claim 36 wherein the extracting  
2 comprises extracting communication data only from a first portion of the  
3 buffer for a given packet and only from a second portion of the buffer for  
4 another packet.

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6           41. The method according to claim 36 wherein the extracting  
7 comprises selectively offset addressing the buffer.

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9           42. The method according to claim 36 wherein the communicating  
10 comprises communicating using wireless communication signals.

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12           43. The method according to claim 36 wherein the communicating  
13 comprises communicating in accordance with a Bluetooth communications  
14 protocol.



